



PTO/SB/08A (08-03)  
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Substitute for form 1449/PTO

## INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Sheet 1 of 5

### Complete if Known

Application Number	10/800,110
Filing Date	March 12, 2004
First Named Inventor	A. Smith
Art Unit	<del>Not yet assigned</del> 1756
Examiner Name	<del>Not yet assigned</del> Young
Attorney Docket Number	38203-6295

### U. S. PATENT DOCUMENTS

Examiner Initials*	Cite No. <sup>1</sup>	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code <sup>2</sup> (if known)			
↓ /CY/	A	US- 5,285,236	02/08/1994	Jain	
	B	US- 5,757,507	05/26/1998	Ausschnitt et al.	
	C	US- 5,828,455	10/27/1998	Smith et al.	
	D	US- 5,877,861	03/02/1999	Ausschnitt et al.	
	E	US- 5,978,085	11/02/1999	Smith et al.	
	F	US- 6,079,256	06/27/2000	Bareket	
	G	US- 6,356,345	03/12/2002	McArthur et al.	
/CY/	H	US- 6,573,986	06/03/2003		
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### FOREIGN PATENT DOCUMENTS

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		Country Code <sup>3</sup> Number <sup>4</sup> Kind Code <sup>5</sup> (if known)				

Examiner Signature /Christopher Young/ (03/22/2007)

Date Considered 03/22/2007

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				Filing Date	March 12, 2004
				First Named Inventor	A. Smith
				Art Unit	Not yet assigned
				Examiner Name	Not yet assigned
Sheet	2	of	5	Attorney Docket Number	38203-6295

NON PATENT LITERATURE DOCUMENTS			
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/CY/	I	G. Muller, "The Waferstepper Challenge: Innovation and Reliability Despite Complexity", Version 1, pp. 1-11, September 10, 2003.	
	J	"KLA 5105 Overlay Brochure", KLA-Tencor	
	K	H.G. Müller et al., "Large Area Fine Line Patterning by Scanning Projection Lithography", MCM Proceedings, pp. 100-104, 1994.	
	L	J. van Schoot et al., "0.7 NA DUV Step & Scan System for 150nm Imaging with Improved Overlay", SPIE Vol. 3679, pp. 448-456, 1999.	
	M	M.A. van den Brink et al., "Direct-Referencing Automatic Two-Points Reticle-To-Wafer Alignment Using a Projection Column Servo System", SPIE, Optical Microlithography V, Vol.	
	N	A. Erdmann et al., "Influence of Optical Nonlinearities of Photoresists on the Photolithographic Process: Applications", SPIE, Vol. 2726-29, 1996.	
	O	J.H. Bruning, "Optical Lithography - Thirty Years and Three Orders of Magnitude", SPIE, Vol. 3051, pp. 14-27.	
	P	B.E. Newnam et al., "Development of XUV Projection Lithography at 60-80 nm", SPIE, Vol. 1671, pp. 419-436, 1992.	
↓	Q	J.E. Bjorkholm et al., "Reduction Imaging at 14 nm Using Multilayer-coated Optics: Printing of Features Smaller than 0.1 μm", J. Vac. Sci. Technol. B 8 (6), pp. 1509-1513, 19	
/CY/	R	"Quaestor Q7 Brochure", Bio-Rad Semiconductor Systems.	

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				Application Number	10/800,110
				Filing Date	March 12, 2004
				First Named Inventor	A. Smith
				Art Unit	Not yet assigned
				Examiner Name	Not yet assigned
Sheet	3	of	5	Attorney Docket Number	38203-6295

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/CY/	S	D. MacMillen et al., "Analysis of Image Field Placement Deviations of a 5X Microlithographic Reduction Lens", SPIE Vol. 334, pp. 78-89, 1982.	
	T	G.C. Robins et al., "Experimental Assessment of Pattern and Probe-Based Aberration Monitors", SPIE, Microlithography Proceedings, Vol. 5040-149, pp. 1-12, 2003.	
	U	J. Sung, "Aberration Measurement of Photolithographic Lenses by Use of Hybrid Diffractive Photomasks", Applied Optics, Vol. 42, No. 11, pp. 1987-1995, April 10, 2003.	
	V	International Technology Roadmap for Semiconductors, 2001 Edition", SEMATECH, pp. 1-21.	
	W	F. Schellenberg, "Resolution Enhancement with OPC/PSM", Future Fab International, Vol. 9, 2000.	
	X	I. Pollentier et al., "Thinking Outside the Box for Improved Overlay Metrology", SPIE Microlithography Proceedings, Vol. 5038, pp. 12-16, 2003.	
	Y	R. Martin et al., "Measuring Fab Overlay Programs", SPIE Metr. Inspection, and Process Control for Microlithography, XIII, pp. 64-71, March 1999.	
	Z	R. DeJule, "Mix-and-Match: A Necessary Choice", Semiconductor International, pp. 66-76, February 2000.	
↓	AA	J. Armitage, "Analysis of Overlay Distortion Patterns", J. Kirk, SPIE, Vol. 921, pp. 207-221, 1988.	
/CY/	AB	J. Wyant et al., "Basic Wavefront Aberration Theory for Optical Metrology", ISBN 0-12-408611-X, Chapter 1, pp. 1-53, 1992.	

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				Application Number	10/800,110
				Filing Date	March 12, 2004
				First Named Inventor	A. Smith
				Art Unit	Not yet assigned
				Examiner Name	
Sheet	4	of	5	Attorney Docket Number	38203-6295

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/CY/	AC	T. Brunner, "Impact of Lens Aberrations on Optical Lithography", IBM, Vol. 41, pp. 1-2, 1997.	
	AD	"TWINSCAN 1100 Product Literature" ASML.	
	AE	C. Ausschnitt, "Distinguishing Dose from Defocus for In-line Lithography Control", SPIE, Vol. 3677, pp. 140-147, 1999.	
	AF	L. Thompson et al., "Introduction to Microlithography", ACS, 2nd Edition, 1994, p. 69.	
	AG	G. Moore, "Cramming More Components Onto Integrated Circuits", Electronics, Vol. 38, No. 8, 1965.	
	AH	P. Rai-Choudhury, "Handbook of Microlithography, Micromachining, and Microfabrication", SPIE Press, Microlithography, Vol. 1, pp. 417, 1997.	
	AI	M.T. Takac et al., "Self-Calibration in Two-Dimensions: The Experiment", SPIE Vol. 2725, pp. 130-146.	
	AJ	M.A. van den Brink et al., "Matching Management of Multiple Wafer Steppers Using a Stable Standard and a Matching Simulator", SPIE Integrated Circuit Metrology, Inspection, and	
↓	AK	M.R. Rough, "Error Estimation for Lattice Methods of Stage Self-Calibration", SPIE Vol. 3050, pp. 614-625.	
/CY/	AL	T.F. Hasan et al., "Automated Electrical Measurements of Registration Errors in Step-and-Repeat Optical Lithography Systems", IEEE Transactions on Electron Devices, Vol. ED-27	

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**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

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**Complete if Known**

Sheet 5 of 5	Application Number	10/800,110
	Filing Date	March 12, 2004
	First Named Inventor	A. Smith
	Art Unit	Not yet assigned
	Examiner Name	Not yet assigned
Attorney Docket Number		38203-6295

**NON PATENT LITERATURE DOCUMENTS**

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/CY/	AM	C.A. Mack, "Inside PROLITH: A Comprehensive Guide to Optical Lithography Simulation", pp. 137-151.	
/CY/	AN	M. Dusa et al., "Comprehensive Focus-Overlay-CD Correlation to Identify Photolithographic Performance", SPIE Vol. 2726, pp. 545-554.	
/CY/	AO	A.J. de Ruyter et al., "Examples of Illumination Source Effects on Imaging Performance", Arch Chemicals Microlithography Symposium, pp. 1-8, September 22, 2003.	

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